



September 16, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19I0872

Re: Ammonia-Storm Ditch

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 8 sample(s) on 9/16/2019 10:05:00AM for the analyses presented in the following report as Work Order 19I0872.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

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WORK ORDER SAMPLE SUMMARY

Date: *Monday, September 16, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Ammonia-Storm Ditch
Lab Order: 19I0872

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0872-01	Plate Mill Storm Ditch		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-02	Main Storm Ditch		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-03	Cannon Storm Ditch		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-04	NW Storm Ditch		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-05	SWTP Effluent/Clarifiers		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-06	001		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-07	031		09/16/2019 00:00	9/16/2019 10:05:00AM
19I0872-08	999		09/16/2019 00:00	9/16/2019 10:05:00AM

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CASE NARRATIVE**Date:** *Monday, September 16, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Ammonia-Storm Ditch
Lab Order: 19I0872

The Matrix Spike and Matrix Spike Duplicate performed on the following sample failed the accuracy criteria for ammonia with a low bias. The precision criteria were met. This data is indicative of a bias related to sample matrix.

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0872-06	001



Analytical Results

Date: Monday, September 16, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: Plate Mill Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0872-01
Sampled: 09/16/2019 0:00
Received: 09/16/2019 10:05

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/16/2019 13:45

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Analytical Results

Date: Monday, September 16, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0872-02
Client Project:	Ammonia-Storm Ditch	Sampled:	09/16/2019 0:00
Client Sample ID:	Main Storm Ditch	Received:	09/16/2019 10:05
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/16/2019 13:47

Analytical Results

Date: Monday, September 16, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0872-03
Client Project:	Ammonia-Storm Ditch	Sampled:	09/16/2019 0:00
Client Sample ID:	Cannon Storm Ditch	Received:	09/16/2019 10:05
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/16/2019 13:49

Analytical Results

Date: *Monday, September 16, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0872-04
Client Project:	Ammonia-Storm Ditch	Sampled:	09/16/2019 0:00
Client Sample ID:	NW Storm Ditch	Received:	09/16/2019 10:05
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	0.13	0.10		mg/L	1	09/16/2019 13:52



Analytical Results

Date: Monday, September 16, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: SWTP Effluent/Clarifiers
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0872-05
Sampled: 09/16/2019 0:00
Received: 09/16/2019 10:05

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	0.36	0.10		mg/L	1	09/16/2019 13:54

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Analytical Results

Date: Monday, September 16, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: 001
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0872-06
Sampled: 09/16/2019 0:00
Received: 09/16/2019 10:05

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	0.31	0.10		mg/L	1	09/16/2019 14:06

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Analytical Results

Date: Monday, September 16, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: 031
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0872-07
Sampled: 09/16/2019 0:00
Received: 09/16/2019 10:05

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia (As N)	di	A	0.98	0.10		mg/L	1	09/16/2019 14:21

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Analytical Results

Date: *Monday, September 16, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: 999
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0872-08
Sampled: 09/16/2019 0:00
Received: 09/16/2019 10:05

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: ABG			
			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/16/2019 11:59			
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	0.12	0.10		mg/L	1	09/16/2019 14:24

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

^d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

ⁱ Kansas Dept Health & Env. NELAP (#E-10397)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler



Comments

No time. Samples preserved at lab

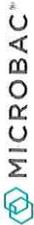
Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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CHAIN OF CUSTODY RECORD



Number **152538**

Instructions on back

TO BE COMPLETED BY MICROBAC
 Temperature Upon Receipt (°C) **6.3-0.3**
 Therm ID **=6**
 Holding Time
 Samples Received on Ice? Yes No N/A
 Custody Seals Intact? Yes No N/A

Turnaround Time
 Routine (5 to 7 business days)
 RUSH* (notify lab)
 (needed by)
 Report Type
 Results Only Level 1 Level 2 Level 3 Level 4 EDD

Invoice Address
 Client Name:
 Address:
 City, State, Zip:
 Contact:
 Telephone No.:

Client Name: **Arcelor - itel**
 Address:
 City, State, Zip:
 Contact: **Temi Kuk**
 Telephone No.:

Send Report via: Mail Fax e-mail (address)
 Send Invoice via: Mail Fax e-mail (address)
 Project: **Warran Howard**
 Location: **Warran Howard**
 PO No.:
 Compliance Monitoring? Yes No
 Agency/Program

Sampler Signature: **Warran Howard**
 Sampler Phone No.:

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)
 ** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types**	Requested Analysis	Additional Notes
Stor-Ditch Plate	9/16/19			K			NT3	19I 0872
Stor-Ditch main							X	01
Stor-Ditch Canal								02
Stor-Ditch PW								03
SWTP Clarifion								04
001 Flare								05
031								06
499								07
								08

Possible Hazard Identification
 Hazardous Non-Hazardous Radioactive
 Comments
 Relinquished By (signature) **W.A. [Signature]** Date/Time **9/16/19 0515**
 Relinquished By (signature) **R. [Signature]** Date/Time **9/16/19 1005**
 Relinquished By (signature) **R. [Signature]** Date/Time **9/16/19 0820**
 Received By (signature) **R. [Signature]** Date/Time **9/16/19 0820**
 Received By (signature) **Warran Howard** Date/Time **9/16/19/1005**